

## CLAIMS

1. A dental hand piece, comprising:

5 a casing having an open front end, an air inlet  
and an air outlet;

a rear bearing inside said casing close to a rear  
end thereof;

10 an air turbine, having a wheel and a plurality  
of blades, performing a rotational movement driven by  
compressed driving air;

a front bearing inside said casing close to said  
front end thereof;

15 an axis, carrying said air turbine and said rear  
and front bearings, further having a front end with a central  
hole;

a drill head, having a rear end that is inserted  
into said central hole of said axis; and

20 a front lid, set on said open front end of said  
casing, sealing said casing, with said drill head passing  
through said front lid.

2. The dental hand piece according to claim 1,  
wherein said driving air is led to said plurality blades  
of said air turbine in an axial direction.

25 3. The dental hand piece according to claim 1,  
wherein between outer peripheries of said front and rear  
bearings and said casing ring-shaped spaces are left.

4. The dental hand piece according to claim 1,  
wherein a front deflector is placed in front of said wheel  
of said air turbine.

30 5. The dental hand piece according to claim 1,

wherein a rear deflector is placed behind said wheel of said air turbine.

5       6.    The dental hand piece according to claim 1, wherein front and rear deflectors are respectively placed in front of and behind said wheel of said air turbine.

      7.    The dental hand piece according to claim 1, wherein a case of said drill head is substituted for said casing and said front lid.

10       8.    The dental hand piece according to claim 1, wherein said air inlet is cut through said casing close to said open front end thereof.

      9.    The dental hand piece according to claim 1, wherein said air outlet is cut through said casing close to a rear end thereof.

15       10.   The dental hand piece according to claim 1, wherein said said air inlet reaches to a front ring channel between an outer periphery of said front bearing and said casing.

20       11.   The dental hand piece according to claim 1, wherein said air outlet reaches to a rear ring channel between an outer periphery of said rear bearing and said casing.

25       12.   The dental hand piece according to claim 10, wherein a sealing ring is inserted between said drill head and said air outlet, preventing any fluid or gas from said drill head to flow into said air outlet.

      13.   The dental hand piece according to claim 10, wherein said air inlet and said air outlet are respectively placed on two opposite sides of said air turbine.